

**DETAIL SPECIFICATION
EXPLOSIVE MATERIAL, COATED; CXM-10**

This specification is approved for use by the Naval Sea Systems Command, Department of the Navy, and is available for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This specification covers three types of coated explosive material, referred to herein as CXM-10. One type is a blend of cyclotetramethylenetetranitramine (HMX), Grade B, Class 2 with isodecyl pelargonate (IDP). The other type is a blend of cyclotetramethylenetetranitramine (HMX), Grade B, Class 3 with isodecyl pelargonate.

1.2 Classification. The coated explosive material (CXM) covered by this specification will be of the following types:

- Type I HMX, Grade B, Class 2 coated with IDP
- Type II HMX, Grade B, Class 3 coated with IDP
- Type III HMX, Grade B, Class 2 and Class 3 coated with IDP

2. APPLICABLE DOCUMENTS

2.1 General. The documents listed in this section are specified in sections 3 and 4 of this specification. This section does not include documents cited in other sections of this specification or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements documents specified in section 3 and 4 of this specification, whether or not they are listed.

2.2 Government documents.

2.2.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplements thereto, cited in the solicitation (see 6.2).

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Commander, Indian Head Division, Naval Surface Warfare Center, Standardization Branch (Code 4230F), 101 Strauss Avenue, Indian Head, MD 20640-5035 by using the Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by sending a letter.

MIL-DTL-DRAFT(OS)

SPECIFICATIONS

FEDERAL

A-A-1202 Coated Abrasive Paper, Flint

MILITARY

MIL-DTL-45444 HMX

MIL-DTL-82901 PBXN-110

STANDARDS

MILITARY

MIL-STD-650 Explosive: Sampling, Inspection and Testing

MIL-STD-1751 Safety and Performance Tests for Qualification of Explosives

(Unless otherwise indicated, copies of federal and military specifications and standards are available from the Standardization Document Order Desk, 700 Robbins Avenue, Bldg. 4D Philadelphia, PA 19111-5094.)

2.2.2 Other Government documents, drawings, and publications. The following other Government documents, drawings, and publications form a part of this document to the extent specified herein. Unless otherwise specified, the issues are those cited in the solicitation (see 6.2).

SPECIFICATIONS

NAVAL AIR SYSTEMS COMMAND (CAGE Code 30003)

AS 2328 Isodecyl Pelargonate

(Applications for copies should be addressed to: Commander, Naval Surface Warfare Center, Indian Head Division (Code 4230H), 101 Strauss Avenue, Indian Head, MD 20640-5035)

DRAWINGS

ARMY ARMAMENT RESEARCH, DEVELOPMENT AND ENGINEERING CENTER (CAGE Code 19203)

7548645 Carton, Packing, Reusable, Collapsible, for High Explosives

(Applications for copies should be addressed to: Commander, US Army Armament, Munitions and Chemical Command, US Army Armament Research, Development and Engineering Center, Attn: SMCAR-BAC-S, Picatinny Arsenal, NJ 07806-5000.)

MIL-DTL-DRAFT(OS)

NAVAL SEA SYSTEMS COMMAND (CAGE Code 10001)

LD 70518

Impact Machine, Parts and Specifications for

(Applications for copies should be addressed to: Commanding Officer, Naval Ordnance Station, Naval Surface Warfare Center, Crane Division, Attn: Code 802, Louisville, KY 40214-5001.)

2.3 Non-Government publications. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of the documents which are DOD adopted are those listed in the issue of the DODISS cited in the solicitation. Unless otherwise specified, the issues of documents not listed in the DODISS are the issues of the documents cited in the solicitation (see 6.2).

NORTH ATLANTIC TREATY ORGANIZATION

STANAG 4515

Assessing the Thermal Stability of Chemicals by
Methods of Thermal Analysis

STANAG 4489

Explosives: Impact Sensitivity Tests

(Application for copies should be addressed to NATO/MAS, Bvd Leopold 111, 1110 Brussels, BE.)

AMERICAN SOCIETY FOR TESTING AND MATERIALS

ASTM D 2905

Textiles, Statements on Number of Specimens for

ASTM E 537

Assessing the Thermal Stability of Chemicals by
Methods of Thermal Analysis

(Application for copies should be addressed to the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103-1187.)

2.4 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 Approval of new ingredient vendors. When a new vendor of a CXM-10 ingredient (see table I) is used, the vendor must be approved in accordance with 4.3. A proposed test and evaluation plan shall be submitted to the CXM-10 Configuration Control Board for review and approval, unless the guidelines provided in section 6 are followed. The CXM-10 Configuration Control Board shall evaluate the test data and determine acceptance or non-acceptance of the new ingredient vendor based on a comparison to the original CXM-10 qualification test data.

3.2 First article. When specified (see 6.2), a sample shall be subjected to first article inspection (see 6.5) in accordance with 4.4.

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3.3 General material requirements. Each material used in the manufacture of CXM-10 shall meet the requirements of the appropriate references listed in table I.

TABLE I. Material requirements.

Ingredient	Reference
HMX	MIL-DTL-45444
IDP	AS 2328

3.3.1 Composition. The composition of CXM-10, Type I shall be formulated to the specification limits of table II. The composition of CXM-10, Type II shall be formulated to the specification limits of table III. The composition of CXM-10, Type III shall be formulated to the specification limits of table IV. The HMX content is verified by analysis and shall meet the requirements of tables II, III, or IV as appropriate, when tested in accordance with 4.6.1.

TABLE II. CXM-10, Type I composition.

Component	Percent by weight
*HMX, Grade B, Class 2	96.00 \pm 1.50
IDP	4.00 \pm 1.50

*Composition of CXM-10 may contain a trace of moisture (see 3.3.4.1).

TABLE III. CXM-10, Type II composition.

Component	Percent by weight
*HMX, Grade B, Class 3	96.00 \pm 1.50
IDP	4.00 \pm 1.50

*Composition of CXM-10 may contain a trace of moisture (see 3.3.4.1).

TABLE IV. CXM-10, Type III composition.

Component	Percent by weight
*HMX, Grade B, Class 2 and Class 3	96.50 \pm 1.50
IDP	4.00 \pm 1.50

*Composition of CXM-10 may contain a trace of moisture (see 3.3.4.1). The weight ratio of the HMX Class 3 to HMX Class 2 is nominally 3:1. To accommodate lot-to-lot variations in the HMX classes (see 6.7), this weight percent ratio is allowed to vary from a minimum of 1:1 to a maximum of 8.78:1. These ratios will result in the following minimum and maximum weight percentages:

<u>Ingredient</u>	<u>Min.</u>	<u>Max.</u>
HMX Class 3	49.0	87.98
HMX Class 2	10.02	49.0

in such a way that the total HMX content remains between 95 percent and 98 percent (see 3.3.1).

3.3.2 Product characteristics. CXM-10, Type I and Type II are uniformly coated, homogeneous, granular, cream-colored materials.

3.3.3 Processing temperature. The processing temperature used throughout the CXM-10 mixing operation shall be not less than 45 degrees Celsius (°C).

3.3.4 Chemical and physical properties. Chemical and physical properties of CXM-10 shall be in accordance with the following.

3.3.4.1 Moisture. The moisture content shall not exceed 0.05 percent by weight when tested in accordance with 4.6.2.

3.3.4.2 Impact sensitivity. The impact sensitivity at the 50 percent fire-probability point (in centimeter (cm) drop height) for CXM-10, Type I shall be less than that of dry HMX, Grade B, Class 2, tested concurrently, when tested in accordance with 4.6.3. Likewise, the impact sensitivity at the 50 percent fire-probability point (in centimeter (cm) drop height) for CXM-10, Type II shall be less than that of dry HMX, Grade B, Class 3, tested concurrently, when tested in accordance with 4.6.3. That is, the measured 50 percent point in cm shall be greater than that of dry HMX, Grade B, Class 2 or Class 3 for CXM-10, Type I or Type II, respectively.

3.3.5 Shelf-life. The CXM-10 material is capable of prolonged storage. Upon removal from storage for use, each package must be visually inspected to insure that the product is uniform and free from foreign materials. Any package that is suspect of contamination should be retested in accordance with 4.6.1. When the storage period exceeds five years from the date of packaging, the material should be retested for composition and moisture in accordance with 4.6.1 and 4.6.2 before use.

3.3.6 Workmanship. The CXM-10 shall be free from contamination with extraneous materials and manufactured in a manner to assure compliance with this specification. The sample shall be evaluated to determine acceptability and the approved standards of workmanship will thereby become a minimum requirement for all units offered for acceptance.

4. VERIFICATION

4.1 Classification of inspections. The inspection requirements specified herein are classified as follows.

- a. Qualification inspection for new ingredient vendors (see 4.3)
- b. First article inspection (see 4.4)
- c. Conformance inspection (see 4.5)

4.2 Inspection conditions. Unless otherwise specified, all inspections shall be performed in accordance with the test conditions specified in the applicable inspection paragraph.

4.3 Approval of new ingredient vendors. When a new vendor of a CXM-10 ingredient (see table I) is proposed for use, the ingredient shall be evaluated in CXM-10 according to an approved test plan. Section 6.6 provides guidance on this test plan. Alternate test plans may be used if approved by the CXM-10 Configuration Control Board. Further, the government reserves the right to require requalification of an ingredient vendor who makes a major change to their process or has not produced the material for over one year. Sufficient material from each of the number of lots of the ingredient, as specified in table V, shall be forwarded to the activity designated by the procuring activity so that a batch or batches of CXM-10 can be made and tested as specified in table V. The qualification batch or batches may be smaller in size than that used in production. The CXM-10 Configuration Control Board shall review the ingredient qualification test results and determine whether the qualification sample is approved or rejected. Approved ingredient vendors are listed in section 6.7.

4.4 First article inspection.

4.4.1 First article inspection. The first article sample shall be manufactured using the same process, procedures, and ingredient vendors proposed for production, and inspected for the requirements of 3.3. This sample shall be tested in accordance with the test procedures specified in 4.6.1 through 4.6.3 prior to the start of production. Failure of the first article sample to pass this inspection shall be cause for rejection of the first article sample. Any production prior to acceptance of the first article sample is at the risk of the contractor.

4.4.2 First article sample. The sample shall consist of 50 pounds of CXM-10 explosive material produced from one batch. A batch is defined as that quantity of material which has been subjected to one or more chemical or physical processes (or combinations thereof) in a single mix intended to produce a desired product having substantially uniform characteristics.

4.5 Conformance inspection. Conformance inspection shall consist of the tests specified in 4.6.1 through 4.6.3. Explosive failing to meet any of the requirements of 3.3 when tested in accordance with 4.6.1 through 4.6.3 shall be classified as defective, resulting in the rejection of the batch from which it was obtained.

4.5.1 Sample identification. The explosive sample container and specimen shall be marked with the following information:

- a. Complete explosive designation
- b. Lot number
- c. Weight of the lot
- d. Manufacturer's name and plant designation
- e. Contract number
- f. Date of manufacture and sampling

4.5.2 Lot size. An inspection lot of CXM-10 is equal to one batch defined in 4.4.2.

4.6 Test methods. The following tests shall be performed using prescribed analytical procedures for replicate determinations given in standard analytical test books. ASTM D 2905 may also be used to determine the number of replicates required. Unless otherwise specified herein, all chemicals and reagents used in test methods shall be reagent grade.

4.6.1 Chemical composition. The chemical composition shall be determined on representative samples of CXM-10 explosive using the procedure of 4.6.1.1.

4.6.1.1 Procedure.

Note: Sample must meet moisture requirement of 3.3.4.1.

- a. Determine the HMX content of CXM-10 in duplicate on the sample from 4.5.1. Weigh a 2-gram sample of CXM-10 to an accuracy of 0.1 mg on an analytical balance. Place the weighed sample into a tared, 30-ml, fine porosity, sintered-glass filtering crucible. A glass stirring rod is to be included in the tare weight of the crucible.

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- b. Extract the sample at ambient temperature using a vacuum filtrator with five portions of 10 mL each of reagent grade methylene chloride saturated with HMX. The extractions should have a stirring time of approximately 1 minute each with the vacuum off while stirring.
- c. Dry the sample for 30 minutes at 90 to 100°C, cool, and weigh.
- d. Calculate percent:

$$\% HMX = \frac{A - B}{C} \times 100$$

Where:

A = Weight of crucible plus residue, g

B = Weight of crucible, g

C = Weight of sample, g

$$\% IDP = 100 - \% HMX - \% \text{moisture content}$$

4.6.2 Moisture. The moisture content can be determined by using MIL-STD-650, Method 101.4.1.

4.6.3 Impact sensitivity test.

4.6.3.1 Impact sensitivity test equipment. The following equipment shall be used for impact sensitivity determination of CXM-10.

(a) ERL-Bruceton type drop test machine, 320 cm maximum drop height (calibrated in 0.1 log units), and equipment with ERL "type 12 tools" (see drawing LD 70518 and figure 1).

(b) Peak reading noise meter (microphone, amplifier, and peak reading voltmeter) or equal with adjustment provided in either the amplifier or voltmeter for zeroing out background noise. The amplifier of the noise meter shall be capable of a voltage gain equivalent to 50 decibels (dB) and equipped for varying the gain. The noise meter shall have a response between 100 hertz and 20 kilohertz and shall be equipped with a dynamic type microphone with output level within the range -60 to -52 dB.

4.6.3.2 Impact sensitivity test procedure. An impact sensitivity test shall be performed on dry CXM-10 loose powder. One set of 25 samples, 35±2 mg per sample, shall be tested using the drop test machine specified in 4.6.3.1(a). The peak reading noise meter specified in 4.6.3.1(b) shall be used in conjunction with the drop test machine to determine when an explosion occurs.

(a) Test each sample of CXM-10 on a fresh 1-inch square piece of Garnet A 511 paper, 180-A type (see 6.8). The sample shall be placed on the grit side of the paper.

(b) Clean the anvil and striker with acetone, and wipe them dry with a clean cloth after each drop. (Resurface the anvil and striker after every 30 explosions).

(c) Determine explosion point and nonexplosion point by dropping the striker from various heights (beginning at 40 cm or 1.6 log units), raising or lowering the drop heights as required until an explosion is obtained. The drop height shall be raised or lowered in increments of 0.1 log units. A fresh sample

shall be used for each drop. After an explosion is obtained, the drop height shall be lowered the specified increment or increments until an explosion is not obtained. When the approximate heights of explosion and nonexplosion are determined, 25 samples shall be tested. Raise the striker one increment at a time until an explosion does occur, then lower the striker similarly until a fresh sample does not explode. Repeat the process until the 25 samples have been tested.

(d) Alternative test procedure: Impact test equipment and procedures as described in STANAG 4489, Explosives: Impact Sensitivity Tests.

(e) Determine the impact sensitivity of dry HMX, Grade B, Class 2 and dry HMX, Grade B, Class 3, using the same procedure.

4.6.3.2.1 Calculation of impact sensitivity. An explosion shall be recorded as a plus sign and a nonexplosion as a minus sign. The 50 percent explosion point or height shall be calculated using the drop heights recorded for those conditions (explosions or nonexplosions, whichever occurred the least number of times). For example, if more nonexplosions occurred than explosions, the drop heights associated with each explosion will be used in the calculation. The terms for the 50 percent explosion point calculations shall be obtained from a table similar to table IV, which is completed with test values as follows.

(a) In column "a", record the drop heights in log increments, beginning with the lowest drop height at which a test (explosion or non-explosion) was observed.

(b) In column "i", list consecutive numbers corresponding to the number of increments above the base or zero line.

(c) In column "n_i", record the number of tests observed at each corresponding drop height.

(d) In column "in_i", record the quantities obtained by multiplying the values listed in column "n_i" times the number listed in column "i" for each corresponding drop height.

(e) Calculate the log of the 50 percent point using the following formulas.

$$\text{Log of 50 percent point in cm} = C + 0.1 \left[\frac{A}{N} + \frac{1}{2} \right]$$

(if nonexplosion values are used)

$$\text{Log of 50 percent point in cm} = C + 0.1 \left[\frac{A}{N} - \frac{1}{2} \right]$$

(if explosion values are used)

Where: C = Log of the lowest drop height for which a value used in the calculations was recorded in column "a",

N = The sum of the test values listed in column "n_i", and

A = The sum of the quantities listed in column "in_i".

TABLE IV. Summary of fire, no-fire chart.

Lowest →	a	i	n_i	in_i	Increasing ↓
		0			
		1			
		2			
		3			
		4			
			N=	A=	

(f) The mean thus computed represents the log of the height in cm for a 50 percent probability of fire. Calculate the anti-log, and report this number as the 50 percent point in cm.

4.6.3.3 Alternate test method. Rotter impact sensitivity test may be conducted in accordance with STANAG 4489.

5. PACKAGING

5.1 Packaging. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When actual packaging of material is to be performed by DOD personnel, these personnel need to contact the responsible packaging activity to ascertain requisite packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activity within the Military Department or Defense Agency, or within the Military Department's System Command. Packaging data retrieval is available from the managing Military Department's or Defense Agency's automated packaging files, CD-ROM products, or by contacting the responsible packaging activity.

6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Intended use. CXM-10 is used as a component of castable PBXN-110 plastic-bonded explosive, MIL-DTL-82901.

6.2 Acquisition requirements. Acquisition documents must specify the following:

- Title, number, and date of this specification.
- Issue of DODISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (see 2.2.1 and 2.3).
- Activity to receive new ingredient vendor samples for qualification tests (see 3.1)
- Whether first article inspection is required (see 3.2).
- Ammunition data cards (see 6.3 and 6.9.4)

- f. Packaging requirements (see section 5 and 6.10)
- g. That the safety precaution requirements or the “Contractors’ Safety Manual for Ammunition, Explosives, and Related Dangerous Material” (DOD 4145.26M) are applicable and should be specified in the contract as required by the Federal Acquisition Regulation (FAR) 2.3.3.

NOTE

When this document is used as part of the description of work to be accomplished by a Government activity, the safety precaution requirements of “Ammunition and Explosives Ashore” (OP 5) should be made applicable.

6.3 Consideration of data requirements. The following data requirements should be considered when this specification is applied on a contract. The applicable Data Item Descriptions (DIDs) should be reviewed in conjunction with the specific acquisition to ensure that only essential data are requested/provided and that the DIDs are tailored to reflect the requirements of the specific acquisition. To ensure correct contractual application of data requirements, a Contract Data Requirements List (DD Form 1423) must be prepared to obtain the data, except where DOD FAR Supplement 27.475-1 exempts the requirements for a DD Form 1423.

<u>Reference, paragraph</u>	<u>DID Number</u>	<u>DID Title</u>
6.9.4	DI-MISC-80043	Ammunition Data Card

(The above DID was cleared as of the date of this specification. The current issue of DOD 5050.12-L, Acquisition Management Systems and Data Requirements Control List (AMSDL), must be researched to ensure that only current, cleared DIDs are cited on the DD Form 1423.)

6.4 Approval of new ingredient vendors. With respect to vendors of CXM-10 ingredients requiring approval, awards will be made to contractors who propose to use only ingredient vendors which are, at the time of award of contract, approved for inclusion in paragraph 6.7, whether or not such vendors have actually been so listed by that date. The attention of the contractors is called to these requirements, and manufacturers are urged to arrange to have their ingredient vendors that they propose to use tested for approval in order that they may be eligible to be awarded contracts or purchase orders for the product covered by this specification. Information pertaining to qualification of CXM-10 ingredient vendors may be obtained from Indian Head Division, Naval Surface Warfare Center, Yorktown Detachment, PO Drawer 160, Yorktown, VA 23691-0160.

6.5 First article. When a first article inspection is required, the contracting officer should provide specific guidance to offerors whether the sample(s) should be a preproduction sample, a first article sample, a first production sample, a sample selected from the first production samples, standard production sample(s) from the contractor's current inventory (see 3.2), and the number of samples to be tested as specified in 4.4. The contracting officer should also include specific instructions in acquisition documents regarding arrangements for examinations, approval of first article test results, and disposition of first articles. Invitations for bids should provide that the Government reserves the right to waive the requirement for samples for first article inspection to those bidders offering a product which has been previously acquired or tested by the Government, and that bidders offering such products, who wish to

rely on such production or test, must furnish evidence with the bid that prior Government approval is presently appropriate for the pending contract. Bidders should not submit alternate bids unless specifically requested to do so in the solicitation.

6.6 Test and evaluation plan for approving new ingredient vendors. Table V provides guidance on those tests and test methods deemed necessary for qualifying a new ingredient vendor. The extent of testing recommended depends on the ingredient. Some programs may want to add system level testing for their application.

TABLE V. Qualification Inspection for new ingredient vendors*.

New Vendor's Ingredient	HMX, Grade B, Class 2, 3	IDP	TEST METHOD
TEST			
CXM-10 Spec. Analysis	XX	X	Test in accordance with 4.6.1 through 4.6.3
Friction Sensitivity	X		Test a CXM-10 sample in accordance with MIL-STD-1751, Method 1021 or 1024, with an RDX Type II Class 5 sample as a standard.
ESD Sensitivity	X		Test a CXM-10 sample in accordance with MIL-STD-1751, Method 1031 or 1033, with an RDX Type II Class 5 sample as a standard.
Thermal Stability	X	X	Test a CXM-10 sample in accordance with MIL-STD-1751 Method 1071; ASTM E 537; or STANAG 4515.

Additional requirements for PBXN-110 made with CXM-10 produced by new vendors or produced with ingredients from new vendors are specified in MIL-DTL-82901.

Table V. Legend:

X = number of lots to evaluate in CXM-10

IDP = Isodecyl Pelargonate

6.7 HMX batches. The ratio of HMX shall be specified in the order. HMX batches as received tend to vary considerably from batch to batch. It is therefore recommended that a 1-gallon (6-kg), or smaller, batch of PBXN-110 (MIL-DTL-82901) be processed and the initial mix viscosity determined for all new batches of HMX. If the initial viscosity is excessive (greater than 10 kp) thus reducing the mix pot life, then the following techniques may be tried in order to reduce the mix viscosity and/or increase pot life:

- a. Shift the HMX-3/HMX2 ratio from 3:1 to a ratio containing more or less Class 2 HMX.
- b. To maximize pot life, the mix temperature should be kept at 25 °C or less. In addition, the catalyst level can be reduced to a lower level but one which is compatible with the limits established in 3.4.
- c. Reduce the total HMX content to 87 percent.

6.8 CXM-10 and CXM ingredient approved vendors.

6.8.1 CXM approved vendor(s).

Indian Head Division
Naval Surface Warfare Center
Yorktown Detachment
PO Drawer 160
Yorktown, VA 23691-0160

CAGE Code 14790

6.8.2 CXM-10 ingredient approved vendors.

6.8.2.1 HMX approved vendor(s).

Bofors Explosives AB
S-691 86 Karlskoga
Sweden

CAGE Code S9784

DYNO ASA
Postboks 779, Sentrum
N-0106 Oslo Norway

CAGE Code N0093

BAE Systems, Ordnance Systems Inc.
4509 West Stone Drive
Kingsport, TN 37660-9982

CAGE Code 1LF48

Holston Defense Corporation
Holston Army Ammunition Plant
4509 West Stone Drive
Kingsport, TN 37660

CAFÉ Code 1D893

(no longer a supplier, but previously
produced material may be available.)

6.8.2.2 IDP approved vendor(s)

Cognis Corporation
(Formerly Henkel, Corp & Emery Industries)
5051 Estecreek Drive
Cincinnati, OH 45232-1446

CAGE Code 0JS01

Product Identification:
Emery 2911 (formerly Emolein 1-800-543-
2911) Plant: Cincinnati, OH

6.9 Garnet paper. The Garnet A 511 paper, 180-A type used for impact sensitivity testing is available from the Norton Company (1-800-551-4413).

6.10 Packaging.

6.10.1 Packaging. The explosive material shall be packaged in accordance with the manufacturer's best commercial practice.

6.10.2 Packing. The material, packaged as specified in 6.9.1, shall be packed to ensure carrier acceptance and safe delivery to the destination at the lowest applicable rate.

6.10.3 Special marking. In addition to any special markings required by the contract or purchase order (see 6.2), all container markings shall be in accordance with MIL-STD-129.

6.10.4 Ammunition data card. When specified in the contract or purchase order (see 6.2), one data card prepared in accordance with MIL-STD-1167 shall be included with each container (see 5.1). If the information contained on the data card is provided with product acceptance documents and the CXM-10 batch numbers and net weight of contents are stenciled on the shipping containers, then data cards shall not be required.

Preparing activity:
Navy - OS
(Project 1376-0006)